

Remarks:

Claims 1-5, 7-16, 18-24, 26-33 and 35-47 are rejected under 35 U.S.C. 112, first paragraph, for reasons stated in the Office Action at pages 2-4, section 4.

The Office Action at pages 3 and 4 asserts that the claims contain subject matter which was not described in the specification. Specifically, the Office Action at pages 3 and 4 assert that the specification does not disclose that the modified region maintains its optical characteristics following irradiation of the modified region during a read operation. In view of the following remarks, the rejections are respectfully traversed, and reconsideration of the rejections is requested.

Applicants submit that it is well known in the art that the RedBook for a compact disk medium specifies limits of operational characteristics of a compact disk, and that a compact disk medium is read by focusing a 780 nm wavelength laser through the bottom of the compact disk medium, and measuring the intensity change of the reflected laser light with a photodiode. It is further submitted that one of skill in the art would readily understand that a reading laser is typically not stronger than 5 mW. Thus, during a normal read operation in compliance with RedBook specifications, a read laser would not change the optical characteristics of a compact disk medium in compliance with the RedBook standard. Accordingly, one of skill in the art would readily understand that a compact disk medium would maintain its "optical characteristics following irradiation of the modified region during the read operation," as claimed. Similarly, lasers used to read optical mediums such as DVDs and Blu-Ray disks, which are read using a 650 nm wavelength laser and a 405 nm wavelength laser, respectively, would not change optical characteristics of their respective optical mediums.

The modifications to optical mediums, as described in the examples provided in the specification as filed, have characteristics which would not be changed following irradiation during a read operation. Instead, one of skill in the art would readily understand that optical media such as compact disks, DVDs, and Blu-Ray disks are generally designed to be repeatedly read, over and over again. Optical media that have uniquely identifiable attributes, such as those

described in the Applicants' disclosure, are intended to thwart, or otherwise hinder, the copying process to a desired extent. However, by maintaining its optical characteristics, the original disk can enjoy continued and repeated use.

For example, in one example embodiment, a region of an optical medium may be modified to have a concave dimple or distortion region (see Figure 15A of the specification as filed). The concave dimple or distortion may be, for example, a physical deformation created by a die in combination with heat, pressure, or friction (see Figures 11-14 of the specification as filed). It is inherent based on the nature of the distortions that their optical characteristics would not be changed by a normal read operation, such as a normal read operation of a compact disk, DVD, or Blu-Ray disk. Further, one of skill in the art would readily understand that the optical characteristics of a compact disk medium comprising a physical deformation, such as a concave dimple or distortion region, would not be changed during a "read operation" of the optical medium.

In addition, in another example embodiment, an optical media may be modified to have a plurality of concave dimples or distortions regions spaced apart from one another. It is inherent based on the nature of the distortions that one of skill in the art would readily understand that a distance between dimples or distortion regions would not change due to a "read operation" of the optical medium.

In another example embodiment, a chemical having a refractive index value at or near RedBook specified limits can be applied to a selected region of an optical medium (see page 26, lines 15-18 of the specification as filed). The chemical may have a refractive index value of 1.45~1.65, which would retard the laser light used to read the compact disk medium. The chemical having a refractive index value changes the optical characteristics prior to a read operation. However, the refractive index of the chemical would not change following irradiation by a laser during a reading operation of the optical medium. It is inherent based on the nature of the distortion that it would not be changed by a normal read operation, such as a normal read operation of a compact disk, DVD, or Blu-Ray disk.

With regard to the rejections of independent claims 1, 12, 23, 32, 41 and 44 under 35 U.S.C. 112, first paragraph, it is submitted that the claim limitation, "the modified region maintaining its optical characteristics following irradiation of the modified region during the read operation," is supported through express, implicit, and inherent disclosure by the specification as filed (see also, M.P.E.P. § 2163(I)(B), second paragraph). Further, the specification as filed provides an adequate written description of the invention, including a description of relevant identifying characteristics, such that a person skilled in the art would recognize that the inventor had possession of the claimed invention. (see also, M.P.E.P. § 2163(II)(A)(3)(a)).

In view of the above, it is therefore submitted that independent claims 1, 12, 23, 32, 41 and 44, and claims 2-5, 7-11, 13-16, 18-22, 24, 26-31, 33, 35-40, 42, 43, 45-47 dependent thereon satisfy the written description requirement under 35 U.S.C. 112, first paragraph. Reconsideration and removal of the rejection of claims 1-5, 7-16, 18-24, 26-33 and 35-47 under 35 U.S.C. 112, first paragraph is respectfully requested.


Closing Remarks

It is submitted that all claims are in condition for allowance, and such allowance is respectfully requested. If prosecution of the application can be expedited by a telephone conference, the Examiner is invited to call the undersigned at the number given below.

In connection with this matter, please charge any otherwise unpaid fees which may be due or credit any overpayment, to Deposit Account Number 501798.

Respectfully submitted,

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